

**REMARKS****I. Introduction**

In response to the pending Office Action, Applicants have amended the Abstract so that it corresponds to the disclosure set forth in the specification. In addition, claims 3, 4 and 6-10 have been cancelled, without prejudice, claims 1, 2 and 5 have been amended to further clarify the intended subject matter of the present invention, and new claims 11-16 have been added to recite additional aspects of the present invention. No new matter has been added.

For the reasons set forth below, it is respectfully submitted that all pending claims are in condition for allowance.

**II. The Rejection Of Claims 1, 4 And 5 Under 35 U.S.C. § 103**

Claims 1, 4 and 5 were rejected under 35 U.S.C. § 103 as being unpatentable over USP No. 6,376,345 to Ohashi, in view of USP No. 6,454,634 to James and WO 00/30159 to Pierce. Applicants respectfully submit that, as amended, all pending claims are patentable over the cited prior art references.

As recited by the pending claims, the CMP method of the present invention includes the steps of: *(a) detecting the state of the surface of the polishing pad using the detector; and (b) controlling the pressure to be applied by the dresser using the controller*, based on a signal from the detector. As one example, as explained on page 8, lines 4-21 of the specification, the detector may include a device for receiving a laser beam reflected by the polishing pad so as to allow for a determination of the roughness of the polishing pad, and then the controller can adjust the dressing pressure based on the roughness of the polishing pad based on the output of the detector. By utilizing the foregoing steps, the surface roughness of the polishing pad can be

maintained within predetermined values. As a result, the present invention can reduce the dishing of the member to be polished and perform stable polishing.

Turning to the cited prior art references, at a minimum, none of the cited references appear to disclose or suggest performing the steps of: *(a) detecting the state of the surface of the polishing pad using the detector; and (b) controlling the pressure to be applied by the dresser using the controller*, based on a signal from the detector. Ohashi discloses various cleaning and anticorrosing steps that can be utilized to prevent defects. James discloses that the polishing pad should have a roughness between  $1\mu\text{m}$  to  $9\mu\text{m}$ . Pierce discloses that the polishing pad should have a roughness less than  $6\mu\text{m}$ . Importantly, however, as noted above, none of the references appear to disclose or suggest the use of a detector for determining the state of the polishing pad, or a controller for controlling the pressure applied by the dresser based on the output of the dresser. Thus, the prior art references fail to disclose or suggest these elements of the amended claim.

Accordingly, as each and every limitation must be disclosed or suggested by the cited prior art in order to establish a *prima facie* case of obviousness (*see*, M.P.E.P. § 2143.03), and at a minimum, the cited prior art references fail to disclose or suggest the foregoing steps recited by claim 1, it is respectfully submitted that claim 1 is patentable over the cited prior art references.

### **III. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as independent claim 1 is patentable for

the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also in condition for allowance.

#### IV. Conclusion

Accordingly, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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